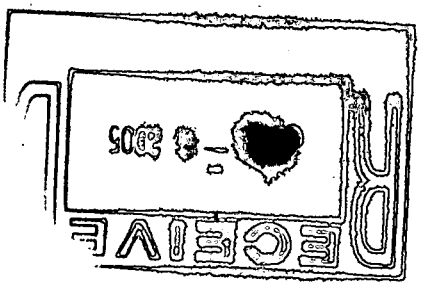
Rocky Flats Environmental Technology Site

TYPE 1
RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

BUILDING T130J CLOSURE PROJECT

June 23, 2005

REVISION 0



CLASSIFICATION REVIEW NOT REQUIRED PER EXEMPTION NUMBER CEX-005-02

ADMIN RECORD

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IA-A-002662

TYPE 1
RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

BUILDING T130J CLOSURE PROJECT

June 23, 2005

REVISION 0

Reviewed by: _____ Date: 6/23/05
Don Risoli, Quality Assurance

Reviewed by: _____ Date: 6/23/05
D.P. Snyder, RISS ESH&Q Manager

Approved by: _____ Date: 06/23/05
Cameron Freiboth, K-H D&D Project Manager

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ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
$DCGL_{EMC}$	Derived Concentration Guideline Level – elevated measurement comparison
$DCGL_W$	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

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EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management of Building T130J. Because this facility was an anticipated Type 1 facility, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i.e., floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility was not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the *Historical Site Assessment Report for the Area 5-Group 6 Facilities*, dated September 2002, Revision 0.

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400.5. Representative laboratory results of building materials suspected of containing asbestos were "None Detected." All beryllium sample results were less than 0.1 $\mu g/100cm^2$. Based upon this RLCR, Building T130J is considered a Type 1 facility and can be demolished. To ensure the facility remains free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly.

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1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of Building T130J. Because this facility was an anticipated Type 1 facility, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facility (i.e., floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility was not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed. Among these is Building T130J. The location of this facility is shown in Attachment A, *Facility Location Map*. This facility no longer supports the RFETS mission and needs to be removed to reduce Site infrastructure, risks and/or operating costs.

Before the facility can be removed, a Pre-Demolition Survey (PDS) must be conducted; this document presents the PDS results. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS built upon physical, chemical and radiological hazards identified in the facility-specific *Historical Site Assessment Report for the Area 5-Group 6 Facilities*, dated September 2002, Revision 0.

1.1 Purpose

The purpose of this report is to communicate and document the results of the RLC effort. A RLC is performed before building demolition to define the pre-demolition radiological and chemical conditions of a facility. The pre-demolition conditions are compared with the release limits for radiological and non-radiological contaminants. RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the pre-demolition radiological and chemical conditions of Building T130J. Environmental media beneath and surrounding the facility is not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP.) Refer to section 2.0 of MAN-127-PDSP for these DQOs.

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2 HISTORICAL SITE ASSESSMENT

A facility-specific Historical Site Assessment (HSA) was conducted to understand the facility history and related hazards. The assessment consisted of facility walkdowns, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological and chemical characterization packages. Results of the facility-specific HSA were documented in a facility-specific *Historical Site Assessment Report for the Area 5 - Group 6 Facilities*, Dated September 2002, Revision 0. Refer to Attachment B, *Historical Site Assessment Report,* for a copy of the Building T130J HSAR. In summary, the HSAR identified a low potential for radiological, chemical, beryllium or asbestos hazards.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Building T130J was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, Radiological Characterization Plans were developed during the planning phases that describe the minimum survey requirements (refer to the RISS Characterization Project files).

One radiological survey package (130J10) was developed for the interior of Building T130J. The survey package was developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Survey Unit 130A01 is a MARSSIM Class 3 area due to the low potential for radiological contamination in Building T130J. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, Radiological Data Summary and Survey Maps. The radiological survey unit package is maintained in the RISS Characterization Project files.

Sixty-four (64) TSA measurements (22 random, 40 biased and 2 QC) and sixty-two (62) RSA measurements (22 random and 40 biased) were performed; and 5% of all remaining interior surfaces of the facility were scanned at biased locations. Additional scan surveys were performed in the instrument storage, calibration and repair rooms on the horizontal surfaces such as desks, work benches and countertops. The RLC data confirmed that this facility does not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps*. The radiological survey unit package is maintained in the RISS

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Characterization Project files. Level 2 Isolation Control postings are displayed on the building to ensure no radioactive materials are inadvertently introduced.

Exterior radiological surveys for Building T130J were performed as part of the West Side Exterior PDS Report, which was approved on March 24, 2005 by DOE and CDPHE. The West Side Exterior PDS Report confirmed that the exterior surfaces of Building T130J do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. The West Side Exterior PDS Report and survey data, statistical analysis results, and survey map locations are maintained in the RISS Characterization Project files

4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building T130J was characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on or in the facility. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan (refer to RISS Characterization Project files) was developed during the planning phase that describes sampling requirements, the justification for the sample locations and estimated sample numbers. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, and PCBs.

4.1 Asbestos

The T130 Trailer Complex (Trailers T130A through T130J) are identical 15,400 square-foot trailers acquired in 1991 from the same manufacturer (refer to Attachment B, Historical Site Assessment Report). Building materials sampled for asbestos in one trailer, therefore, would be representative of the asbestos content for the same materials in the other trailers. Thus, bulk samples taken in one trailer would be representative of bulk samples taken in another trailer. A survey of building materials suspected of containing asbestos was conducted in Trailers T130D and T130E as part of the Area 5 – Group 6a RLCR, dated April 15, 2003. A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1.* Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspector. Four (4) samples each were taken in Trailers T130D and T130E and all laboratory results of building materials suspected of containing asbestos were "None Detected". Because trailers T130D and T130E are representative of the same materials in T130J, it is assumed there is no asbestos containing materials in T130J. On this basis, no asbestos sampling was performed in T130J as part of the RLC.

4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, Building T130J was an anticipated Type 1 facility. There was not, however, adequate historical and process knowledge to conclude that beryllium was not used or stored in this building. Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium*

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Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999. Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

All beryllium smear sample results were less than 0.1 $\mu g/100cm^2$. Beryllium laboratory sample data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps.*

4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on a review of the HSAR and a facility walk-down, Building T130J was used primarily as an office trailer, and never contained any operations that could lead to RCRA/CERCLA contamination, therefore, RCRA/CERCLA constituent sampling was not performed in this facility as part of the RLC.

Sampling for lead in paint in Building T130J was not performed. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) waste, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal. There were no high contamination areas in T130J.

4.4 Polychlorinated Biphenyls (PCBs)

Based on the HSARs, interviews and facility walk-downs of Building T130J, no PCB-containing equipment was ever present in the building, making the potential for PCB contamination resulting from spills highly unlikely. Therefore, PCB sampling was not performed in Building T130J as part of the RLC. Based on the age of Building T130J (constructed after 1980), paints used do not contain PCBs. Additionally, there are no suspected PCB light ballasts in this facility. However, all light ballasts will be inspected and if leaking PCB ballasts are discovered, they will be removed and managed accordingly.

5 PHYSICAL HAZARDS

Physical hazards associated with Building T130J consist of those common in standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. The facility has been relatively well maintained and is in good physical condition, and therefore, does not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

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6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of Building T130J, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- the *number* of samples and surveys;
- the *types* of samples and surveys;
- the sampling/survey process as implemented "in the field"; and,
- the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment E, *Data Quality Assessment Detail.*

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of Building T130J will generate sanitary waste. Estimated waste volumes are presented below. All waste can be disposed of as sanitary waste, there is no radioactive or hazardous waste.

Waste Volume Estimates and Material Types – Building T130J

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste
T130J	0	3,500	1,500	3,000	4,500	0	None

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Building T130J is classified as a RFCA Type 1 facilities pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999) and can be demolished. The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC/PDS data.

The RLC of Building T130J was performed in accordance with the DDCP and PDSP. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. Building T130J did not contain radiological or hazardous waste. Environmental media beneath and surrounding the facility will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

To ensure this Building T130J remains free of further contamination, Level 2 Isolation Controls have been established with the required postings.

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9 REFERENCES

DOE/RFFO, CDPHE, EPA, 1996. Rocky Flats Cleanup Agreement (RFCA), July 19, 1996.

DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

EPA, 1994. "The Data Quality Objective Process," EPA QA/G-4.

K-H, 1999. Decommissioning Program Plan, June 21, 1999.

MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.

MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.

MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, July 15, 2002.

MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.

MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, August 2000, Revision 1 (NUREG-1575, EPA 402-R-97-016).

PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev. 1, May 22, 2001.

PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.

PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.

PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999.

PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999.

RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.

RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.

RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999.

Historical Site Assessment Report for the Area 5 - Group 6 Facilities, dated September 2002, Revision 0.

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ATTACHMENT A

Facility Location Map

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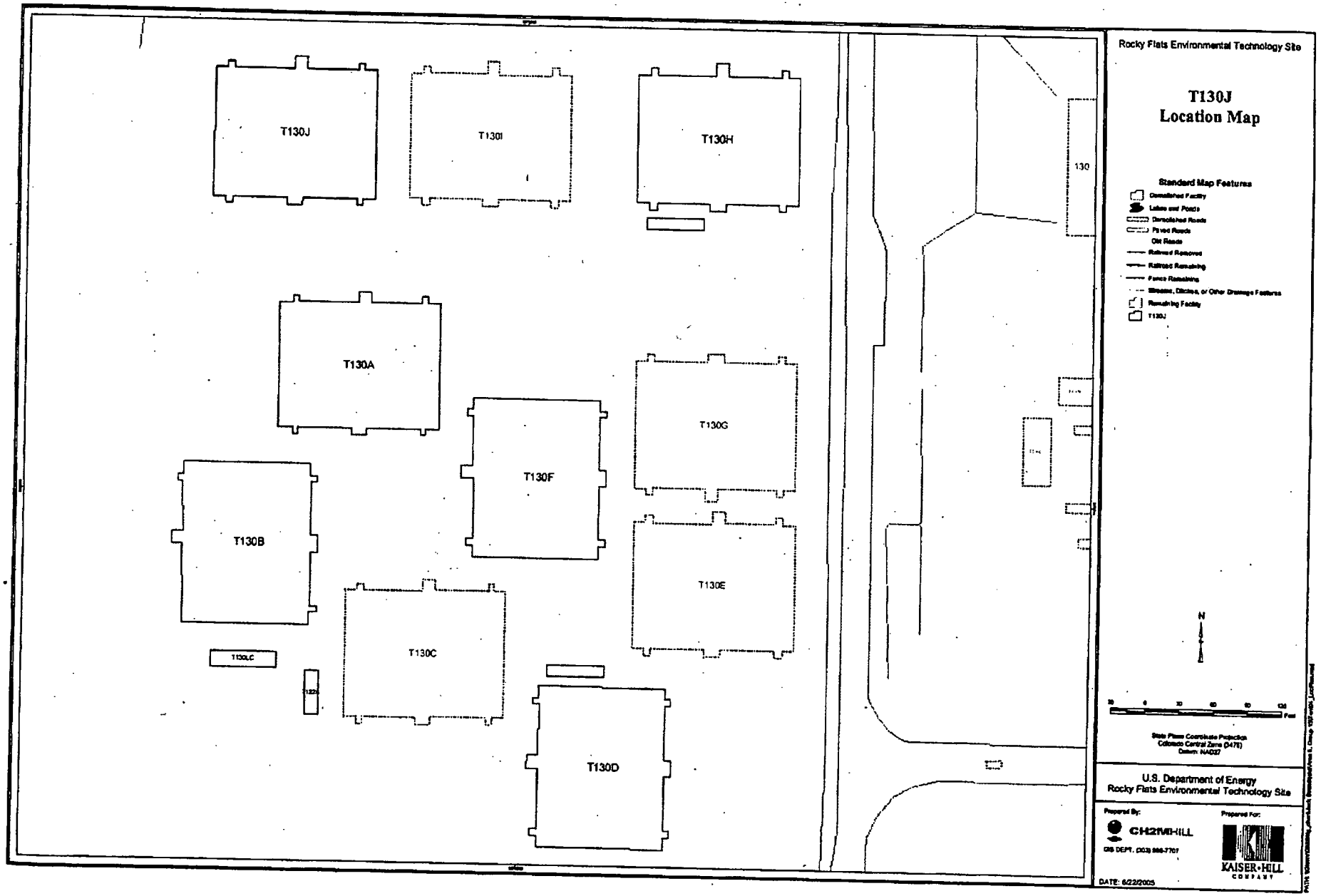
T130J
T130I
T130H
T130A
T130G
T130F
T130B
T130E
T130C
T130D
130
Rocky Flats Environmental Technology Site
T130J
Location Map
Standard Map Features
Demolished Facility
Lakes and Ponds
Demolished Roads
Paved Roads
Dirt Roads
Railroad Removed
Railroad Remaining
Fence Remaining
Streams, Ditches, or Other Drainage Features
Remaining Facility
T130J
N
State Plane Coordinate Projection
Colorado Central Zone (0476)
Datum: NAD27
U.S. Department of Energy
Rocky Flats Environmental Technology Site
Prepared By:
CH2MHILL
GIS DEPT. (303) 866-7707
Prepared For:
KAISER-HILL COMPANY
DATE: 6/22/2005

ATTACHMENT B

Historical Site Assessment Report

&D RISS Facility Characteriz: n
Historical Site Assessment Report
September, 2002 Rev. 0

Facility ID: (AREA 5 GROUP 6) Trailers T130 A, B, C, D, E, F, G, H, I, and J.
Anticipated Facility Type (1, 2, or 3): Trailers T130 A, B, C, D, E, F, G, H, I, and J are anticipated Type 1 facilities.

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

Trailers T130 A, B, C, D, E, F, G, H, I and J.

The T130 Trailers are identical trailers. These trailers are each 15,400 square-foot general office trailers and were acquired in 1991. These modular trailers are each approximately 120-feet wide by 130-feet long. Each trailer has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure.

The interiors are primarily a cubical layout, but have several hard-walled offices, conference rooms, and rest rooms. Interior walls are wallboard, the ceiling is a drop ceiling with acoustical tiles and recessed lights. The floors are primarily covered with carpet except in the bathrooms and dock entranceways, which are covered with vinyl tile.

The T130 Trailers each have the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

Historical Operations

The T130 trailers we originally installed to support the RFETS Resumption activities in the early 1990s. In the mid 1990s the trailer began housing other management and administrative support operations in support of the site closure goals. Over the last few years, as field trailers from inside the Industrial Zone have been removed, more field activities have been moved into the T130 trailers. On occasion, some trailers have set up RMS to store test sealed sources or to store environmental samples that may contain very low levels of chemical or radiological activity.

Trailers T130A, B, E, and I have recently set up RMAs for the storage of sealed test sources in support of field activities. The site photographic department has recently moved to T130 and established a Satellites Accumulation Area to handle it photo-developing waste. There has been no evidence of building contamination associated with these activities. The remaining Trailers addressed in the HSA (T130C, D, F, H, and J) have primarily been used for management or administrative uses.

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Currently T130A houses field sampling operation , the Canberra analytical organization, and the BioAssay receiving and shipping operations. A RMA was established to support these activities in 2002. T130B houses Rad Safety and Rad Engineering and established a RMA in 2000. T130C houses general management and administrative activities such as Analytical Services, Waste Shipping support personnel, Ecology, and Regulatory Compliance. T130D houses general management and administrative activities such as Rocky Flats Site Closure Services senior management, Legal, and Project Controls. T130E houses the SteelWorkers Union, Emergency Preparedness and the Radiological Assistance Team (RAP Team). An RMA was established in the early 1990s to house sealed sources and emergency response radiological equipment. T130F houses general management and administrative activities such as TRU Waste Programs and Materials Stewardship. T130G houses general management and administrative activities, CERCLA Records, document control, and Analytical Serviced document management. In 2002, the Photography department was moved to T130G. A Satellites Accumulation Area was established to handle the Photo-developing waste. T130H houses general management and administrative activities such as KH Construction. T130I houses general management and administrative activities such as Telecommunications, Computer Support, and RISS Radiological Support personnel. An RMA was established in 2002 to support RISS Radiological Support operations. T130J houses general management and administrative activities such as Bartlett Janitorial Services, Roads and Grounds, RISS Industrial Hygiene, and RISS support personnel.

Current Operational Status

The T130 A, B, C, D, E, F, G, H, I and J trailers are all currently operational

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos:

None of the trailers addressed in this HSA have an asbestos posting. The Industrial Hygiene Group (IH) has collected some asbestos data on the T130 office trailers. Contact IH for a copy of this information.

Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations:

None of the Trailers addressed in this HSA are on the List of known Be Areas.

Summarize any recent Be sampling results:

There have been no recent Be samples collected on any of these facilities.

Lead

Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):

Based on the age of some of the trailers addressed in this HSA, lead in paint should not be a concern. No processes containing lead were conducted in these trailers.

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RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, and processes):

In 2002, the Photography department was moved into T130G. A Satellites Accumulation Area was established to handle it Photo-developing waste. Canberra Mobile Services has a chemical cabinet to store acid and base ampules used to preserve some water samples.

See the Historical operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA.

Describe any potential, likely, or known spill locations (and sources, if any):

None of the facilities in this HSA have had any RCRA/CERCLA spills.

Describe methods in which spills were mitigated, if any:

None of the facilities in this HSA have had any RCRA/CERCLA spills.

PCBs

Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):

No PCB containing process where housed in any of the Trailers addressed in this HSA. Based on the age of construction of some of these facilities, PCBs in paint should not be a concern.

Describe any potential, likely, or known spill locations (and sources, if any):

No PCB spills occurred in any of the Trailers addressed in this HSA.

Describe methods in which spills were mitigated, if any:

No PCB spills occurred in any of the Trailers addressed in this HSA.

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Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations:

None of the Trailers in this HSA are radiological posted. However, several of the Trailers addressed in this HSA have RMAs established in them. In addition, Trailer T130A houses the field sampling operations and also houses Canberra Gamma Spectroscopy operations. There is no evidence of building contamination associated with these activities. See the Historical operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):

Except as noted in the historical operations section above radiological material has no routinely stored or handled in any of the facilities addressed in this HSA.

Describe methods in which spills were mitigated, f any:

None of the facilities in this HSA have had a radiological spill.

Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):

Isotopes of concern include uranium and plutonium.

Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):

See section below for information on IHSSs PACs, and UBCs.

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):

None of the Trailers addressed in this HSA are associated with any IHSSs, PACs, or UBCs.

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):

None

References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews):

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. The WSRIC for those buildings with a WSRIC. In addition, a facility walkdown and interviews were performed.

Waste Volume Estimates and Material Types

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Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
Trailer T130A	0	3500	1500	3000	4500	TBD	N/A
Trailer T130B	0	3500	1500	3000	4500	TBD	N/A
Trailer T130C	0	3500	1500	3000	4500	TBD	N/A
Trailer T130D	0	3500	1500	3000	4500	TBD	N/A
Trailer T130E	0	3500	1500	3000	4500	TBD	N/A
Trailer T130F	0	3500	1500	3000	4500	TBD	N/A
Trailer T130G	0	3500	1500	3000	4500	TBD	N/A
Trailer T130H	0	3500	1500	3000	4500	TBD	N/A
Trailer T130I	0	3500	1500	3000	4500	TBD	N/A
Trailer T130J	0	3500	1500	3000	4500	TBD	N/A

Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Begin the RLC/PDS process.

Note:

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. SMEs should evaluate and/or verify all information during the RLC/PDS process. SMEs may need to review additional documentation and perform additional interviews. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in this report. Newer Data will appear in the RLCR/PDSR.

Prepared By: Doug Bryant / Doug Bryant / September 2002

Name Signature Date

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ATTACHMENT C

Radiological Data Summaries and Survey Maps

Survey Area: 5 Survey Unit: [illegible] Building: [illegible]
Description: [illegible]

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 22 | Nbr Biased Measurements Required: 40 | Nbr QC Required: 2
Nbr Random Measurements Performed: 22 | Nbr Biased Measurements Performed: 40 | Nbr QC Performed: 2

Alpha	
Maximum:	30.9 dpm/100cm^2
Minimum:	-8.6 dpm/100cm^2
Mean:	8.3 dpm/100cm^2
Standard Deviation:	9.0
QC Maximum:	23.9 dpm/100cm^2
QC Minimum:	19.5 dpm/100cm^2
QC Mean:	21.7 dpm/100cm^2
Transuranic $DCGL_{W}$:	100.0 dpm/100cm^2
Transuranic $DCGL_{EMC}$:	300.0 dpm/100cm^2

Removable Surface Activity Measurements

Nbr Random Measurements Required: 22 | Nbr Biased Measurements Required: 40
Nbr Random Measurements Performed: 22 | Nbr Biased Measurements Performed: 40

Alpha	
Maximum:	3.9 dpm/100cm^2
Minimum:	-0.9 dpm/100cm^2
Mean:	0.7 dpm/100cm^2
Standard Deviation:	1.1
Transuranic $DCGL_{W}$:	20.0 dpm/100cm^2

Media Sample Results

Nbr Random Required: 0 | Nbr Biased Required: 0
Nbr Random Collected: 0 | Nbr Biased Collected: 0

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

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Survey Area: [illegible] Survey Unit: [illegible] Building: [illegible]
Description: [illegible]

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	510643	06/13/05	Electra	1244	DP-6	12/01/05	0.210	NA	300.0	NA	S
2	511466	06/13/05	Electra	3127	DP-6	08/21/05	0.206	NA	300.0	NA	S
3	510643	06/15/05	Electra	1244	DP-6	12/01/05	0.210	NA	300.0	NA	S
4	511466	06/15/05	Electra	3127	DP-6	08/21/05	0.206	NA	300.0	NA	S
5	510643	06/16/05	Electra	1244	DP-6	12/01/05	0.210	NA	300.0	NA	T/S
6	510766	06/16/05	Electra	3552	DP-6	12/02/05	0.204	NA	48.0	NA	T/S
7	511466	06/16/05	Electra	1369	DP-6	09/10/05	0.223	NA	48.0	NA	T/S
8	511466	06/16/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
9	511466	06/16/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R
10	510766	06/17/05	Electra	1369	DP-6	09/10/05	0.223	NA	48.0	NA	Q

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

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Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

In addition to scan surveys indicated on the map, desk tops, work benches and countertops were scanned in areas where instruments were repaired and calibrated.

RSA Comments: N/A

Media Comments: N/A

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Survey Area: [illegible] Survey Unit: [illegible] Building: [illegible]
Reactor Coolant Pump [illegible]

Random Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PRP-N001	8	0.9	N/A	N/A
130J10PRP-N002	9	-0.9	N/A	N/A
130J10PRP-N003	8	0.9	N/A	N/A
130J10PRP-N004	9	0.6	N/A	N/A
130J10PRP-N005	8	-0.6	N/A	N/A
130J10PRP-N006	9	0.6	N/A	N/A
130J10PRP-N007	8	2.4	N/A	N/A
130J10PRP-N008	9	0.6	N/A	N/A
130J10PRP-N009	8	3.9	N/A	N/A
130J10PRP-N010	9	2.1	N/A	N/A
130J10PRP-N011	8	0.9	N/A	N/A
130J10PRP-N012	9	-0.9	N/A	N/A
130J10PRP-N013	8	0.9	N/A	N/A
130J10PRP-N014	9	0.6	N/A	N/A
130J10PRP-N015	8	0.9	N/A	N/A
130J10PRP-N016	9	-0.9	N/A	N/A
130J10PRP-N017	8	-0.6	N/A	N/A
130J10PRP-N018	9	-0.9	N/A	N/A
130J10PRP-N019	8	0.9	N/A	N/A
130J10PRP-N020	9	0.6	N/A	N/A
130J10PRP-N021	8	0.9	N/A	N/A
130J10PRP-N022	9	0.6	N/A	N/A

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Survey Area [illegible] Survey Unit [illegible] Building [illegible]

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PBP-N023	8	-0.6	N/A	N/A
130J10PBP-N024	9	0.6	N/A	N/A
130J10PBP-N025	8	2.4	N/A	N/A
130J10PBP-N026	9	2.1	N/A	N/A
130J10PBP-N027	8	0.9	N/A	N/A
130J10PBP-N028	9	2.1	N/A	N/A
130J10PBP-N029	8	0.9	N/A	N/A
130J10PBP-N030	9	2.1	N/A	N/A
130J10PBP-N031	8	0.9	N/A	N/A
130J10PBP-N032	9	2.1	N/A	N/A
130J10PBP-N033	8	0.9	N/A	N/A
130J10PBP-N034	9	0.6	N/A	N/A
130J10PBP-N035	8	-0.6	N/A	N/A
130J10PBP-N036	9	0.6	N/A	N/A
130J10PBP-N037	8	0.9	N/A	N/A
130J10PBP-N038	9	2.1	N/A	N/A
130J10PBP-N039	8	0.9	N/A	N/A
130J10PBP-N040	9	-0.9	N/A	N/A
130J10PBP-N041	8	0.9	N/A	N/A
130J10PBP-N042	9	0.6	N/A	N/A
130J10PBP-N043	8	2.4	N/A	N/A
130J10PBP-N044	9	0.6	N/A	N/A
130J10PBP-N045	8	-0.6	N/A	N/A
130J10PBP-N046	9	0.6	N/A	N/A
130J10PBP-N047	8	0.9	N/A	N/A
130J10PBP-N048	9	-0.9	N/A	N/A
130J10PBP-N049	8	-0.6	N/A	N/A

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Survey Area: [illegible] Survey Unit: [illegible] Building: [illegible]
Description: [illegible]

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PBP-N050	9	0.6	N/A	N/A
130J10PBP-N051	8	0.9	N/A	N/A
130J10PBP-N052	9	0.6	N/A	N/A
130J10PBP-N053	8	-0.6	N/A	N/A
130J10PBP-N054	9	0.6	N/A	N/A
130J10PBP-N055	8	-0.6	N/A	N/A
130J10PBP-N056	9	-0.9	N/A	N/A
130J10PBP-N057	8	0.9	N/A	N/A
130J10PBP-N058	9	3.6	N/A	N/A
130J10PBP-N059	8	0.9	N/A	N/A
130J10PBP-N060	9	2.1	N/A	N/A
130J10PBP-N061	8	0.9	N/A	N/A
130J10PBP-N062	9	0.6	N/A	N/A

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Random/QC Total Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PRP-N001	6	9.5	N/A	N/A
130J10PRP-N002	7	13.4	N/A	N/A
130J10PRP-N003	6	9.5	N/A	N/A
130J10PRP-N004	6	6.1	N/A	N/A
130J10PRP-N005	5	11.7	N/A	N/A
130J10PRP-N006	5	24.6	N/A	N/A
130J10PRP-N007	6	12.5	N/A	N/A
130J10PRP-N008	5	-4.0	N/A	N/A
130J10PRP-N009	6	15.9	N/A	N/A
130J10PRP-N010	5	19.8	N/A	N/A
130J10QRP-N010	10	23.9	N/A	N/A
130J10PRP-N011	5	8.9	N/A	N/A
130J10PRP-N012	7	4.4	N/A	N/A
130J10PRP-N013	6	15.9	N/A	N/A
130J10PRP-N014	7	4.4	N/A	N/A
130J10PRP-N015	6	1.2	N/A	N/A
130J10PRP-N016	5	19.8	N/A	N/A
130J10QRP-N016	10	19.5	N/A	N/A
130J10PRP-N017	6	6.1	N/A	N/A
130J10PRP-N018	7	4.4	N/A	N/A
130J10PRP-N019	7	-1.4	N/A	N/A
130J10PRP-N020	5	24.6	N/A	N/A
130J10PRP-N021	5	8.9	N/A	N/A
130J10PRP-N022	7	-0.0	N/A	N/A

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Survey Map: [illegible] Survey Unit: [illegible] Buildings: [illegible]
Description: [illegible]

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PBP-N023	5	10.7	N/A	N/A
130J10PBP-N024	5	-5.5	N/A	N/A
130J10PBP-N025	5	1.2	N/A	N/A
130J10PBP-N026	5	4.0	N/A	N/A
130J10PBP-N027	5	13.5	N/A	N/A
130J10PBP-N028	5	10.7	N/A	N/A
130J10PBP-N029	5	16.9	N/A	N/A
130J10PBP-N030	5	4.0	N/A	N/A
130J10PBP-N031	6	-1.9	N/A	N/A
130J10PBP-N032	6	30.9	N/A	N/A
130J10PBP-N033	5	1.2	N/A	N/A
130J10PBP-N034	5	4.0	N/A	N/A
130J10PBP-N035	5	4.0	N/A	N/A
130J10PBP-N036	6	14.3	N/A	N/A
130J10PBP-N037	5	23.1	N/A	N/A
130J10PBP-N038	5	16.9	N/A	N/A
130J10PBP-N039	7	0.4	N/A	N/A
130J10PBP-N040	7	6.2	N/A	N/A
130J10PBP-N041	5	4.0	N/A	N/A
130J10PBP-N042	5	13.5	N/A	N/A
130J10PBP-N043	5	23.1	N/A	N/A
130J10PBP-N044	5	7.3	N/A	N/A
130J10PBP-N045	7	-2.7	N/A	N/A
130J10PBP-N046	7	9.4	N/A	N/A
130J10PBP-N047	5	1.2	N/A	N/A
130J10PBP-N048	5	-2.2	N/A	N/A
130J10PBP-N049	5	4.0	N/A	N/A

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Survey Area: Survey Unit: Building:

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130J10PBP-N050	5	-5.5	N/A	N/A
130J10PBP-N051	5	4.0	N/A	N/A
130J10PBP-N052	6	27.5	N/A	N/A
130J10PBP-N053	6	17.7	N/A	N/A
130J10PBP-N054	5	1.2	N/A	N/A
130J10PBP-N055	7	-2.7	N/A	N/A
130J10PBP-N056	5	7.3	N/A	N/A
130J10PBP-N057	5	-5.5	N/A	N/A
130J10PBP-N058	7	-8.6	N/A	N/A
130J10PBP-N059	7	18.3	N/A	N/A
130J10PBP-N060	7	15.2	N/A	N/A
130J10PBP-N061	5	7.3	N/A	N/A
130J10PBP-N062	6	9.4	N/A	N/A

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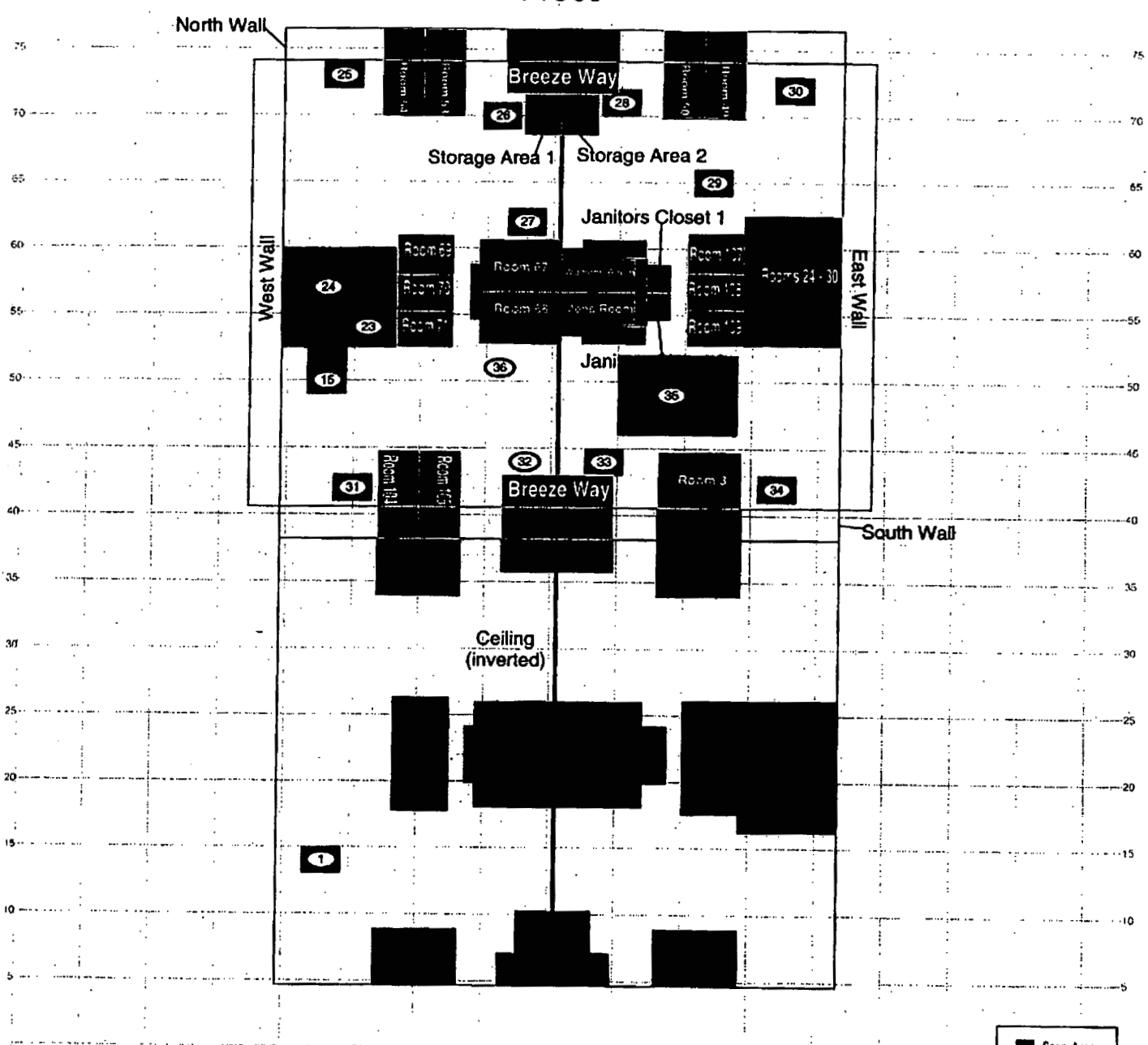
RECONNAISSANCE LEVEL SURVEY FOR T130J

Survey Area: 5 **Survey Unit: 130J10** **Classification: 3**
Building: T130J
Survey Unit Description: T130J, interior, all surfaces
Total Area: 4556 sq. m. **Total Floor Area: 1432 sq. m.**

T130J



SURVEY MAP LEGEND
- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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N

0 FEET 45
0 METERS 15

1 inch = 36 feet 1 grid sq. = 1 sq. m.

Scan Area

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL Communications Group

MAP ID: 03-0085\T130J_Pg1_SC Mar. 8, 2005

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1-7

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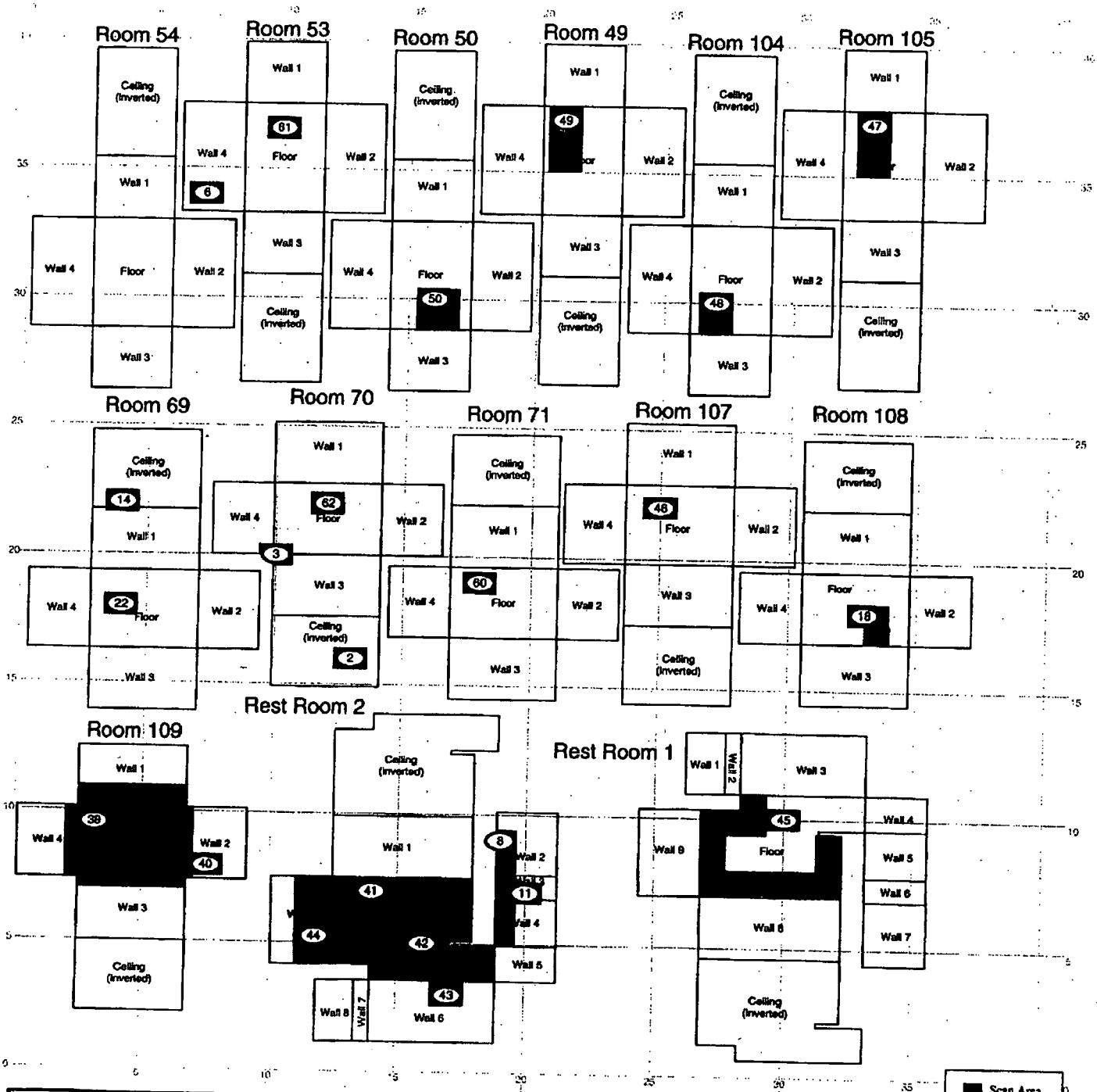
RECCONNAISSANCE LEVEL SURVEY FOR T130J

Survey Area: 5 **Survey Unit: 130J10** **Classification: 3**
Building: T130J
Survey Unit Description: T130J, Interior, all surfaces
Total Area: 4556 sq. m. **Total Floor Area: 1432 sq. m.**



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1-7

N

0 FEET 25
0 METERS 8

1 inch = 18 feet 1 grid sq. = 1 sq. m.

Scan Area

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

CH2MHILL Communications Group

Prepared for:

MAP ID: 03-0085\T130J_PG2_SC June 21, 2005

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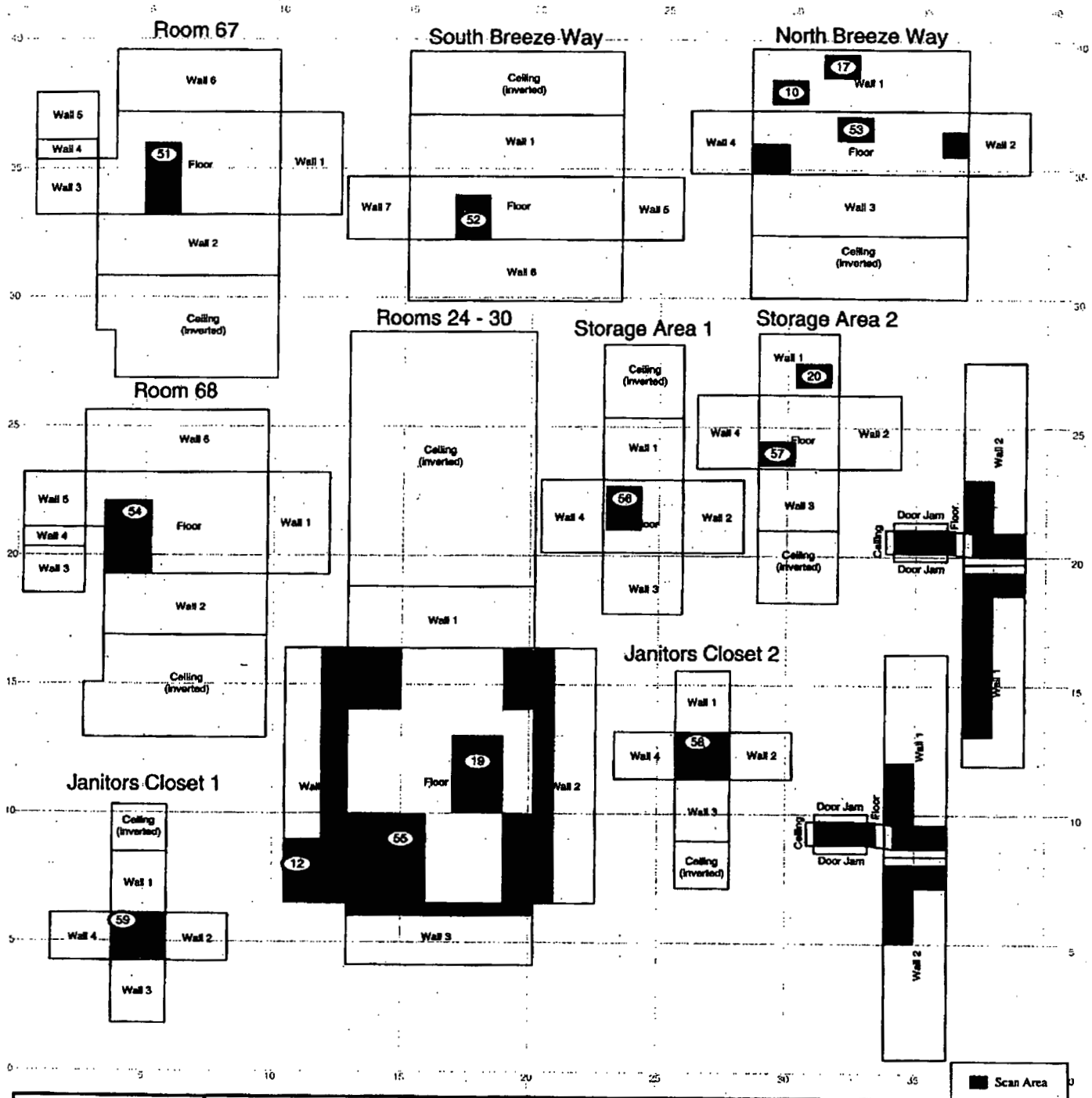
RECONNAISSANCE LEVEL SURVEY FOR T130J

Survey Area: 5 **Survey Unit: 130J10** **Classification: 3**
Building: T130J
Survey Unit Description: T130J, Interior, all surfaces
Total Area: 4556 sq. m. **Total Floor Area: 1432 sq. m.**



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 25
0 METERS 8

1 inch = 18 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1-7

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL
Communications Group

MAP ID: 03-0085\T130J_PG3_SC June 21, 2005

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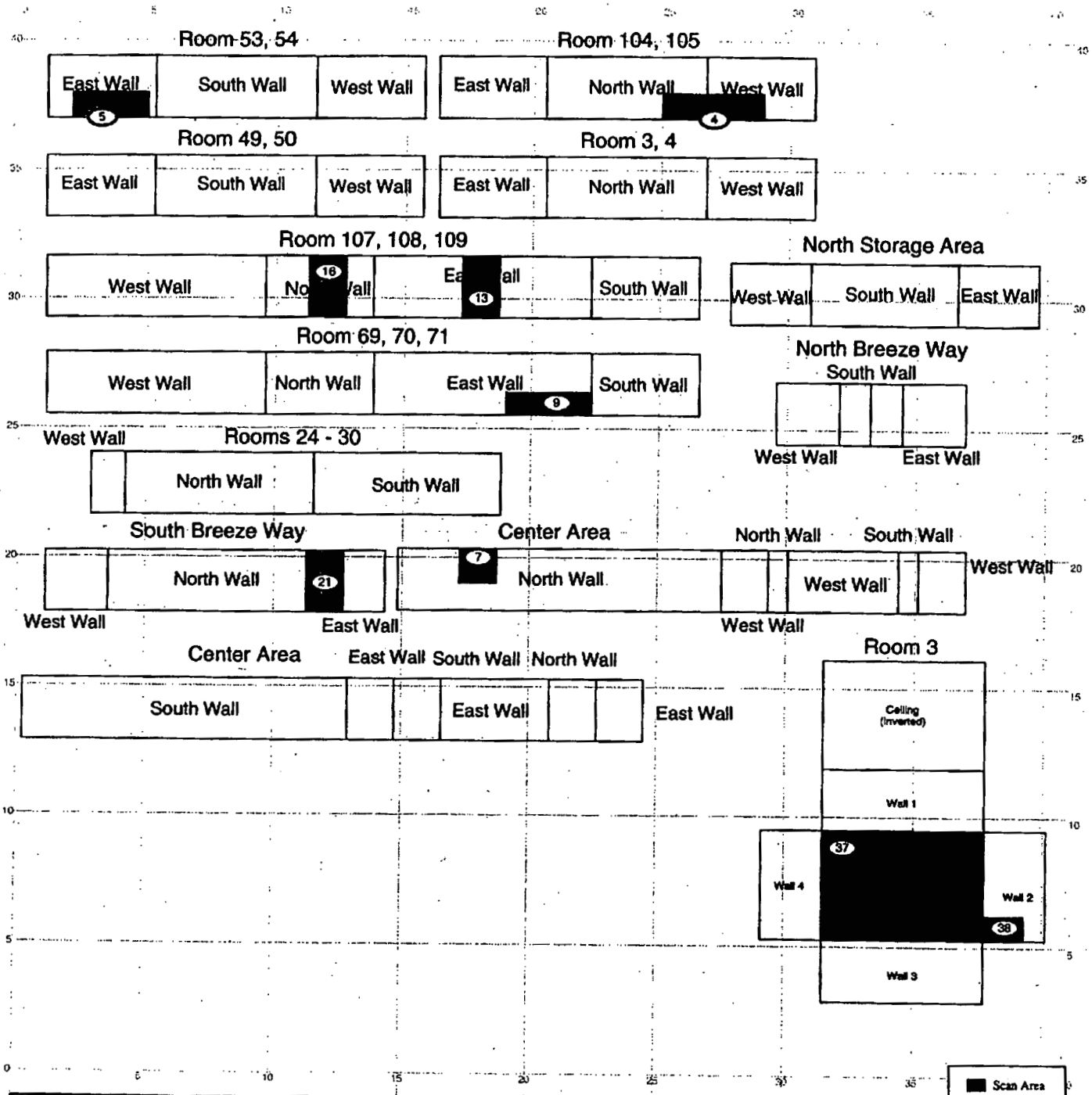
RECONNAISSANCE LEVEL SURVEY FOR T130J

Survey Area: 5 **Survey Unit: 130J10** **Classification: 3**
Building: T130J
Survey Unit Description: T130J, Interior, all surfaces
Total Area: 4556 sq. m. **Total Floor Area: 1432 sq. m.**



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 25
0 METERS 8

1 inch = 18 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1-7

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL Communications Group

MAP ID: 03-0085\T130J_Pg4_SC June 21, 2005

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ATTACHMENT D

Chemical Data Summaries and Sample Maps

Beryllium Data Summary

Sample Number	Map Survey Point Location	Sample Location	Result ($\mu g/100\ cm^2$)
Building T130J – RIN 05D1240			
T130J-06152005-214-001	1	Room 3, Alpha Group Service, Top of cabinet, south wall	< 0.1
T130J-06152005-214-002	2	Room 3, Alpha Group Service, Shelve, west wall	< 0.1
T130J-06152005-214-003	3	Mens room-count room, top of shelve, west side	< 0.1
T130J-06152005-214-004	4	Mens room-count room, floor, east side	< 0.1
T130J-06152005-214-005	5	Room 109, top of work bench	< 0.1
T130J-06152005-214-006	6	Alarm area, top of alarm storage rack, south end	< 0.1
T130J-06152005-214-007	7	Alarm area, top of work bench (instrument), west side	< 0.1
T130J-06152005-214-008	8	Alarm area, top of cabinet, east side	< 0.1
T130J-06152005-214-009	9	Breezeway floor, north end	< 0.1
T130J-06152005-214-010	10	Room 28, IH lab, top of equipment bench	
T130J-06152005-214-011	11	Room 28, IH lab, top of cabinet, Room 68 shelf	< 0.1
T130J-06152005-214-012	12	North east entrance, floor	< 0.1
T130J-06152005-214-013	13	South east entrance, floor	< 0.1
T130J-06152005-214-014	14	Breezeway floor, south end	< 0.1
T130J-06152005-214-015	15	Locker room floor	< 0.1

Note: Sample Numbers T130J-06152005-214-016 through T130J-06152005-214-018 are blanks.

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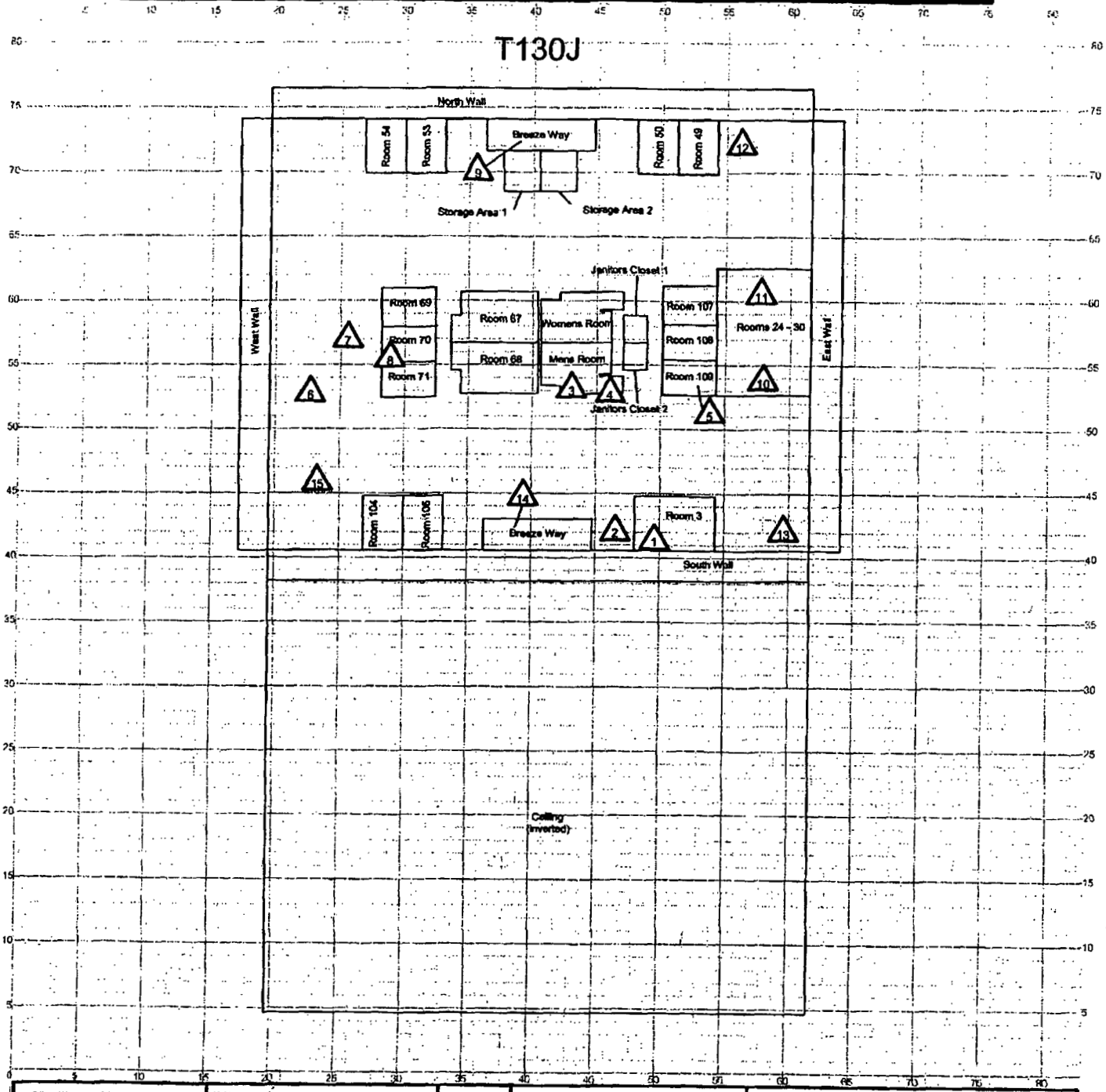
CHEMICAL SAMPLE MAP

Building T130J
Beryllium



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 45
0 METERS 15

1 inch = 36 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL Communications Group

MAP ID: 03-0085\T130J_BE June 23, 2005

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ATTACHMENT E

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically asbestos and beryllium).

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed; the radiological survey assessment is provided in Table E-1 and beryllium in E-2. A data completeness summary for all results is given in Table E-3.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files. This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for Building T130J based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic $DCGL_w$ (100 dpm/100cm^2) and the Uranium $DCGL_w$ (5,000 dpm/100cm^2) unrestricted release limits.

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties.

Based upon an independent review of the radiological data, it was determined that the original project DQOs satisfied MARSSIM guidance. All facility contamination levels were below applicable unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration were within acceptable limits thereby ensuring accuracy criteria. All results meet the PDS unrestricted release criteria.

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Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility. On this basis, Building T130J meets the unrestricted release criteria with the confidences stated herein and can be demolished.

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Table E-1 V&V of Radiological - Building T130J

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	Measure	frequency	COMMENTS
ACCURACY	initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field; programmatic records.
	daily source checks	80%<x<120%	≥1/day	Performed daily/within range.
	local area background: Field	typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)
PRECISION	field duplicate measurements for TSA	≥5% of real survey points	≥10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Unit 130J10 (interior) and EXT-B-001 (exterior).	statistical and biased	NA	Random w/ statistical confidence.
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m.
	Controlling Documents (Characterization Pkg; RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	units of measure	dpm/100cm^2	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable	>95% >95%	NA	See Table E-3 for details.
SENSITIVITY	detection limits	TSA: ≤50 dpm/100cm^2 RA: ≤10 dpm/100cm^2	all measures	MDAs ≤ 50% DCGL$_w$ per MARSSIM guidelines (RLC performed to PDS requirements).

Table E-2 V&V of Beryllium - Building T130J

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB --->	Johns Manville Corp. Littleton, Co.	
QUALITY REQUIREMENTS		RIN --->	RIN 05D1240	
		Measure	Frequency	COMMENTS
ACCURACY	Calibrations Initial	linear calibration	≥1	No qualifications significant enough to change project decisions, i.e., classification of a Type 1 facility confirmed. All results were below associated action levels.
	Continuing	80%<%R<120%	≥1	
	LCS/MS	80%<%R<120%	≥1	
	Blanks - lab & field	<MDL	≥1	
	interference check std (ICP)	NA	NA	
PRECISION	LCSD	80%<%R<120% (RPD<20%)	≥1	
	field duplicate	all results < RL	≥1	
REPRESENTATIVENESS	COC	Qualitative	NA	
	hold times/preservation	Qualitative	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	measurement units	ug/100cm^2	NA	
COMPLETENESS	Plan vs. Actual samples usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	detection limits	MDL of 0.00084 ug/100cm^2	all measures	

Table E-3 Data Completeness Summary - Building T130J

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC)	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Asbestos	Building T130J (interior)	3 samples (interior)	^0 samples	^No ACM present, all results < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 ^Refer to section 4.1, *Asbestos,* for justification as to why asbestos sampling was not performed as part of this RLC.
Beryllium	Building T130J (interior)	5 biased (interior)	15 biased (interior)	No beryllium contamination found, all results are below associated action levels	OSHA ID-125G RIN 05D1240 No results above action level (0.2ug/100cm^2) or investigative level (0.1 ug/100cm^2).
Radiological	Survey Area 5 Class 3 Survey Unit: 130J10 Building T130J – All Surfaces (interior)	62 α TSA (22 random/40 biased) and 62 α Smears (22 random/40 biased) 2 QC TSA 5% scan on all interior surfaces	62 α TSA (22 random/40 biased) and 62 α Smears (22 random/40 biased) 2 QC TSA 5% scan on all interior surfaces; additional scan surveys were performed in the instrument storage, calibration and repair rooms on the horizontal surfaces such as desks, work benches and countertops.	No contamination found at any location; all values below PDS unrestricted release limits	Transuranic DCGLs used.